



CLIMA Media Release

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THE GOOD OIL ON MUSTARD

Canola oil is the most widely used feedstock for biodiesel in WA, however mustard oil can offer a cheaper alternative for growers in drier areas to help them become more self sufficient when canola is in short supply and fossil fuel prices are high.

Centre for Legumes in Mediterranean Agriculture (CLIMA) researcher, Margaret Campbell said mustards were very reasonable canola substitutes because they were more drought tolerant and could be grown in drier areas where canola didn't do well.

“In Rural Industries Research and Development Corporation supported projects, the oils from locally grown Indian and Ethiopian mustards were good feedstocks for biodiesel because they had more than 40 per cent oil, were cheaper to grow than canola and could produce comparatively high seed yields,” Ms Campbell said.

Riverland Oilseed Processors in Pinjarra recently produced more than 20,000 litres of oil from crushed WA grown mustard, which was subsequently processed by O'Connor-based company, Bioworks.

Bioworks found mustard biodiesel easier to produce than canola biodiesel because the suspended particulate matter in canola oil needed more chemical processing.

Mustard oils also have a low melting point and the erucic acid content provides good lubricating qualities for the fuel.

Mustard seed byproducts have on-farm benefits, although mustard meal is used at a lower rate than canola meal in stock feed rations.

“Because mustard meal is typically high in glucosinolates, which gives it a ‘hot’ taste, only five per cent is used in stock feed, compared to 10 per cent for canola meal.

“However, washing the meal removes this taste, making it more palatable to stock,” Ms Campbell said.

“Glucosinolates can also enhance mustard meal’s use as a natural fertiliser, soil conditioner and biocide, which the Department of Agriculture and Food is evaluating.

“With 100 tonnes of seed producing 60 tonnes of meal, the nutrients in mustard meal can be recycled as fertiliser at an equivalent value of \$110 per tonne,” she said.

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Some growers have bought crushing plants to produce their own biofuel.

“Farm units cost between \$10,000 and \$50,000 and the on-farm costs of making biodiesel are around one dollar per litre,” Ms Campbell said.

“A small \$10,000 plant can process up to four tonnes of oilseed, producing 1000 to 1400 litres of oil daily,” she said.

Binnu growers, 2006 RIRDC Rural Woman of the Year, Bev Logue and husband Phil, have made their own plants to prepare for escalating fuel prices or supply limitations.

The Logues actively promoted on-farm and community biodiesel production, which could be done simply and affordably using easily obtained tanks, hoses and pipes.

“Growers interested in producing biodiesel need to do their own sums, comparing the cost of biodiesel production with the price of mineral diesel and the price offered for the seed at the time,” Ms Campbell said.

Blending biodiesel with mineral diesel will help extend mineral diesel supply and adding around five per cent mustard biofuel in diesel can improve fuel quality.

Ms Campbell said broad scale mustard adoption was currently limited by available weed control options, as it was impossible to control competitive weeds such as wild radish.

“However, with the support of the Wheatbelt Regional Development Scheme, we hope to develop mustard lines tolerant to particular herbicides within three years.”

Image caption: Centre for Legumes in Mediterranean Agriculture researcher, Margaret Campbell in a Brassica greenhouse at UWA.

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by Brendon Cant & Associates, Tel 08 9384 1122

MEDIA CONTACT: Margaret Campbell, Tel 08 6488 1792
or Mobile 0403 122 630